

REMARKS

Claims 1-11, 13-18 and 20-26 are pending in this application. By this Amendment, claims 1, 10 and 21 are amended. Support for amended claims 1 and 10 may be found in, for example, paragraph [0032] in the instant specification. No new matter has been added. Reconsideration and allowance of this application are respectfully requested.

ENTRY OF AMENDMENT AFTER FINAL REJECTION

Entry of the amendment is requested under 37 CFR § 1.116 because the amendment: a) places the application in condition for allowance for the reasons discussed herein; b) does not present any additional claims without canceling the corresponding number of final rejected claims; and c) places the application in better form for appeal, if an appeal is necessary. Entry of the amendment is thus respectfully requested.

EXAMINER'S INTERVIEW

Applicants appreciate the courtesies extended to Applicants' representative during the August 3, 2006 telephonic interview. During the interview, Applicants' representative suggested claim amendments for the Examiner's consideration. The Examiner indicated that he will fully consider the Amendments and remarks when a formal response is submitted. Reconsideration and allowance of this application are respectfully requested.

OBJECTION TO THE CLAIMS

Claims 22 and 23 are objected under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of the independent claim. Applicants have amended claim 21 to overcome the Examiner's objections (e.g., claim 21 recites "An arrangement"). Accordingly, claims 22 and 23 recite the particulars of the "central office power

source” and the “compact remote power source”, respectively. Reconsideration and withdrawal of the objection are respectfully requested.

Claim Rejections - 35 U.S.C. §103

Claims 1-11, 13-18 and 20-26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cohen (U.S. Patent No. 6,665,404) in view of Fujiwara et al. (hereinafter “Fujiwara”) (U.S. PG Pub. No. 2004-0228060 A1). This rejection is respectfully traversed.

Applicants submit that Cohen and Fujiwara, individually or in combination, fail to disclose or suggest a method of transmitting electrical power from a power source to a remote load over a telephone twisted pair, comprising, *inter alia*, “when one of the power feeds reaches an associated limit, the power source will reduce an output voltage and increase load so as to share the load among each of the power feeds”, as recited in claims 1 and 10.

Applicants submit that both Cohen and Fujiwara are completely silent with regard to the power source reducing an output voltage and increasing load. Instead, Cohen discloses that when the power sources have verified that the apparatus 10 has terminated the line pairs, the power sources will raise the voltage over the line pairs so that electrical power is conveyed at steady state and at a direct current I.¹ With regard to Fujiwara, Fujiwara merely discloses an overvoltage and overcurrent protection circuit, but does not teach or suggest the power source reducing an output voltage and increasing load.

Accordingly, Cohen and Fujiwara, individually or in combination, fail to disclose or suggest a method wherein “when one of the power feeds reaches an associated limit, the power source will reduce an output voltage and increase load so as to share the load among each of the power feeds”, as recited in claims 1 and 10.

¹ See Cohen, col. 4, lines 56-67.

Further, Applicants submit that Cohen and Fujiwara, individually or in combination, fail to disclose or suggest “protecting one or both of the power source and a given remote power converter against transient-induced damage”, as recited in claim 1.

The Examiner stated in the Office Action that Cohen “discloses all elements of except transient protection”.² Yet, the Examiner attempts to overcome the admitted deficiency of Cohen by arguing that Fujiwara teaches the features of the transient protector. Applicants respectfully disagree.

Specifically, paragraph [0020] of Fujiwara discloses:

[t]he telephone interface protection circuit 10 includes a voltage limiting element ZNR to limit transient overvoltages to no more than the withstand voltage of the circuit to be protected 40, and a positive temperature coefficient thermostatic resistor PTC to limit the flow of overcurrents to the circuit to be protected 40. The voltage limiting element ZNR and positive temperature coefficient thermostatic resistor PTC are thermally coupled together, and constructed so that heat generated by the voltage limiting element ZNR can be efficiently transferred to the positive temperature coefficient thermostatic resistor PTC.

In other words, the protection circuit 10 of Fujiwara is used to protect the electrical load devices, rather than to protect one or both of the power source and a given remote power converter. As shown in an example, non-limiting embodiment of the present invention with respect to Fig. 3, a method of transmitting electrical power over telephone wire including transient protectors 340 in central office (CO) power node 320 connected via twisted pair lines 330 to a compact remote power supply 350 is shown. Further, at the receiving end, the twisted pair lines pass through transient protectors 355 to a remote power source 360.³ By this configuration, the arrangement 300 may enable the delivery of over 100 watts of power by combining multiple power converters, while simultaneously limiting the incoming power from each of the twisted pairs to 100 watts each.

² Final Office Action, page 3, lines 7-8.

Accordingly, Cohen and Fujiwara, individually or in combination, fail to disclose or suggest a method “protecting one or both of the power source and a given remote power converter against transient-induced damage”, as recited in claim 1.

Moreover, Applicants submit that the alleged combination of Cohen and Fujiwara would not be sufficient to render the claims *prima facie* obvious. Specifically, combining the teachings of Fujiwara with the teachings of Cohen would at least substantially destroy the prior art and change the principle of operation of the prior art. For example, Fujiwara discloses drawing significant current during an over-voltage event. This current would heat the PTC, which results in an interruption of power to the circuitry. Once the over-voltage condition ceased, the PTC would cool, and then power would be re-established.⁴ On the other hand, Cohen discloses drawing additional power over the remaining line pairs as long as safety parameters per pair do not exceed a pre-defined threshold.⁵ Thus, one of ordinary skill in the art would recognize that the operational function of re-establishing power in Fujiwara and the operational function of re-establishing power in Cohen are fundamentally different from each other. Accordingly, if the alleged modification and/or combination of the prior art will change the principle of operation, then the teachings of the references are not sufficient to render the claims *prima facie* obvious, In re Ratti.⁶ Absent such a *prima facie* case of evidence, there would not have been any motivation to combine the references of Cohen and Fujiwara in the manner as suggested by the Examiner.

Further, the Examiner uses impermissible hindsight reconstruction to reject the features recited in claim 1. That is, the Examiner's assertion that “[i]t would have been obvious to one skilled in the art at the time of the invention to apply a protection circuit taught by Fujiwara to the

⁴ See paragraph [0022].

⁵ See col. 5, lines 39-42.

⁶ 272 F.2d 810, 123 USPQ 349 (CCPA 1959)

power system taught by Cohen for the purpose of realizing the aforesaid advantages”⁷, is not evidence for obviousness. Applicants disagree with the Examiner’s reasoning, and submit that the mere possibility that one reference could be used in another is not sufficient evidence of a suggestion or motivation to combine the references. Applicants submit that the Examiner has used the present application as a blue print, selected a device for remote line powering in a telecommunication network device as the main structural device, and then searched other prior art for the missing features without identifying or discussing any specific evidence of motivation to combine, other than providing conclusory statements regarding the knowledge in the art, motivation and obviousness. The Federal Circuit has noted that the PTO and the Courts cannot use “hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention”, In re Fine⁸, and that the best defense against the hindsight based obviousness analysis is the rigorous application of the requirement for a showing of a teaching or motivation to combine the prior art references. Thus, Applicants submit that the Examiner has failed to provide evidence of motivation for combining the teachings of Cohen and Fujiwara.

In view of the above arguments, Applicants assert that the Examiner has not established the required motivation to combine the teachings of Cohen and Fujiwara and therefore fails to establish a prima facie case of obviousness under 35 U.S.C. §103(a).

Accordingly, Applicants submit that claim 1 is patentable. For somewhat similar reasons, Applicants submit that claims 10, 16, 17, 20, 21, 24 and 25 are also patentable (although claims 1, 10, 16, 17, 20, 21, 24 and 25 should be governed solely based on the limitations present therein and should not be limited, in any way, by limitations present in claim 1 and not present in claims 10, 16, 17, 20, 21, 24 or 25). Claims 2-9, 11, 13-15, 18, 22, 23 and

⁷ Final Office Action, page 3, lines 11-13.

⁸ 5 USPQ 2d 1780 (Fed. Cir. 1988),

26, which depend from the independent claims, are likewise distinguished over the applied arts for the reasons discussed above as well as for the additional features they recite. Reconsideration and withdrawal of the rejection are respectfully requested.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of claims 1-11, 13-18 and 20-26 in connection with the present application is earnestly solicited.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) hereby petition(s) for a two (2) months extension of time for filing a reply to the Office Action and submit the required \$450.00 extension fee herewith.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By


Gary D. Yacura, Reg. No. 35,416

P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

GDY/DJC